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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/446,711 04/03/00 ALLARD

F P04334US0

EXAMINER

HM12/0608

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COLLINS, C.	
ART UNIT	PAPER NUMBER

1638

DATE MAILED:

06/08/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/446,711

Applicant(s)

ALLARD ET AL.

Examiner

Cynthia Collins

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claims 1-37 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction is required under 35 U.S.C. 121 and 372.
2. This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.
3. In accordance with 37 CFR 1.499, applicant is required, in response to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-22, 24-25, and 36, drawn to a method of increasing or inducing cold or freezing tolerance in a plant by combining acclimation and increasing the concentration of betaine or a derivative thereof in said plant, classified in class 504, subclass 320, for example.

Group II, claim(s) 26-31, drawn to a method of reducing the growth rate of a plant by treating said plant with betaine or a derivative thereof, classified in class 514, subclass 556, for example.

Group III, claim(s) 32, drawn to a method of stimulating and improving the germination rate of plant seeds by administering to said seeds betaine or a derivative thereof, classified in class 514, subclass 556, for example.

Group IV, claim(s) 33 and 36, drawn to a method of inducing or increasing cold tolerance in a plant sensitive to temperature of about 0°C or higher by administering to said plant betaine or a derivative thereof, classified in class 504, subclass 320, for example.

Group V, claim(s) 23 and 34-37, drawn to a method of increasing or inducing cold or freezing tolerance in a plant by increasing the accumulation of a protein having the

biological characteristics of WCOR410 in said plant, by increasing the concentration of betaine or a derivative thereof in said plant, classified in class 504, subclass 320, for example.

4. The inventions listed as Groups I-V do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

5. The technical feature linking Groups I-V appears to be the use of betaine or a betaine derivative, or the increase of betaine or a betaine derivative.

6. However, a correlation between cold tolerance and increased levels of betaine in plants is obvious or anticipated over KISHITANI et al. (1994, Plant Cell and Environment, Vol. 17, No. 1, pages 89-95, Applicant's International Search Report). The use of betaine to suppress vertical growth in plants is also obvious or anticipated over EP 0 017946 A ((BASF AG) 29 October 1980, Applicant's International Search Report). In addition, the use of betaine to enhance seed germination and growth is obvious or anticipated over WO 9535022 ((COMMW SCIENT IND RES ORG; BODAPATI PURUSHOTHAMA NAIDU (AU)) 28 December 1995, Applicant's International Search Report).

7. Therefore, the technical feature linking the inventions of Groups I-V does not constitute a special technical feature as defined by PCT Rule 13.2, because it does not define a contribution over the prior art.

8. Furthermore, the inventions of Groups I-V are distinct methods because each method requires the use of different method steps and different components, and each method results in the production and isolation of chemically and structurally distinct products. Thus the inventions

of Groups I-V are each capable of being separately made, independently used and the patentability of one would not render the other obvious or unpatentable.

9. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, their recognized divergent subject matter, and the requirement for different areas of search, restriction for examination purposes as indicated is proper.

10. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

11. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

#### ***Remarks***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Collins whose telephone number is (703) 605-1210. The examiner can normally be reached on Monday-Friday 8:45 AM -5:15 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Hutzell can be reached on (703) 308-4310. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and 1 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

CC

June 6, 2001

ELIZABETH F. McELWAIN  
PRIMARY EXAMINER  
GROUP 1800

*Elizabeth F. McElwain*